UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/619,352	07/14/2003	Mark L. Buer	48974/SDB/B600	6343

26111 7590 09/10/2008

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.
1100 NEW YORK AVENUE, N.W.
WASHINGTON, DC 20005

EXAMINER	
GEE, JASON KAI YIN	
ART UNIT	**PAPER NUMBER**
2134	
MAIL DATE	**DELIVERY MODE**
09/10/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/619,352	BUER, MARK L.	
	Examiner	Art Unit	
	JASON K. GEE	2134	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 February 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-19, 21, 22, 24-27, 29, 30, 34-41, and 43-46* is/are pending in the application.

4a) Of the above claim(s) *1-17 and 35-37* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *18,19,21,22,24-27,29,30,34,38-41 and 43-46* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This action is response to communication: RCE filed on 08/18/2008.

2. Claims 18, 19, 21, 22, 24-27, 29, 30, 34, 38-41, and 43-46 are currently pending in this application.

3. No new IDS has been received on this application.

4. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 08/18/2008 has been entered.

Response to Arguments

5. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Claim Objections

6. The previous claim objections have been withdrawn in response to applicant's amendment.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims , 19, 21, 22, 24-27, 29, 30, 34, 38-41, and 43-46 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per the claims, the claims recite "mirrored" security processors. It is unclear what the term "mirrored" encompasses. It is unclear whether the security processors are exactly the same, or capable to perform the same type of functions, or have another meaning. As seen through the applicant's specification, the mirrored processors seem to be able to perform the same type of functions, as the mirrored security processors take over for one another in the event of failure.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. Claims 18, 19, 25-27, 38, 39, and 45-46 are rejected under 35 U.S.C. 103(a) as being anticipated by Simon et al. US Patent Application Publication 2003/0093691 (hereinafter Simon), in view of Murthy et al. US patent No. 5,515,376 (hereinafter Murthy).

As per claim 18, Simon teaches a method of providing redundancy in a security processing system comprising: establishing a first secure packet from through a first mirrored (paragraph 70 and 95) security processor (paragraphs 50, 51, 59); updating

security association information associated with the first secure packet flow (paragraphs 59, 79, 80); establishing a second secure packet flow through a second mirrored (paragraphs 70 and 95) security processor (50, 51, 59, Figure 1, as these processes take place on multiple edge routers); updating security association information associated with the second secure packet flow (paragraphs 50, 51, 59, and Figure 1, as these processes take place on multiple edge routers); sending the updated security association information associated with the first secure packet flow form the first mirrored security processor to the second mirrored security processor at a first predefined interval (paragraphs 60, 64, 66, 70, 74, and 82, wherein paragraphs 70 and 82 teaches that information may be distributed directly between edge routers, as it is advantageous to combine the functions of a cryptographic node with an edge router; also discussed in detail in paragraphs 72-73;); sending the updated security association information associated with the second secure packet flow for the second security processor to the first security processor at a second predefined interval(paragraphs 60, 65, 66, 70, 74, and 82, wherein paragraphs 70 and 82 teaches that information may be distributed directly between edge routers; also, Figure 1, wherein it shows multiple edge routers, and wherein the paragraphs teach that the edge routers send each other the updated SA information; also discussed in detail in paragraphs 72 and 73); storing the updated security information associated with the first secure packet flow and the updated security association information associated with the second secure packet flow in the first security processor and in the second security processor (paragraphs 64-66 and 70).

However, at the time of the invention, Simon does not explicitly teach wherein the update packets have a custom routing header configured to allow routing of the first update packet through the security processors. However, this is taught by Murthy throughout the reference, such as in col. 22 line 60-68 and col. 9 line 35-50.

At the time of the invention, it would have been obvious to one of ordinary skill in the art to combine the Simon and Murthy references. One of ordinary skill in the art would have been motivated to perform such an addition to efficiently increase security measures through the monitoring of all the network segments (col. 2 lines 20-43 and col. 3 lines 3-5).

As per claim 19, Simon teaches wherein the rerouting step is in response to a failure of packet flow through the first security processor (abstract, paragraph 79, paragraph 95).

As per claim 25, Simon teaches generating at least one configuration packet including the security association information, wherein the sending step comprises sending the at least one configuration packet (paragraphs 54-55).

As per claim 26, Simon teaches sending, by a host processor, configuration information to the first security processor and the second security processor (paragraphs 32-37, 55, 56, 57).

As per claim 27, Simon teaches sending, by a host processor, security association configuration information to the first security processor and the second security processor (paragraphs 32-35, 37, 55, 56, 57).

Claim 38 is rejected using the same basis of arguments used to reject claim 18 above.

As per claim 39, Simon teaches at least one host processor connected to the at least one switch for terminating or initiating the first packet flow and the second packet flow (paragraph 43, Figure 3).

As per claim 45, Simon rerouting the secure packet flow to flow through the second security processor instead of the first (paragraphs 70, abstract, and paragraph 95)

As per claim 46, Simon teaches at least one host processor for establishing a first packet flow to a first security processor and a second packet flow to a second security processor (throughout the reference, and for example, paragraphs 70-73.

11. Claims 21, 22, 24, 29-30, and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Simon and Murthy as applied above, and in view of Xiong et al. US Patent Application Publication 2003/0061507 (hereinafter Xiong).

As per claim 21, Murthy teaches sequence numbers, wherein the sequence number is incremented when an update packet is reeived from or transmitted to a network (col. 9 lines 35-50 and col. 22 liens 60-68). However, the Murthy combination does not teach wherein the sequence number is in the header portion of the packet. However, this is taught by Xiong, such as in paragraph 23.

At the time of the invention, it would have been obvious to one of ordinary skill in the art to include a sequence number with a security association. One of ordinary skill in the art would have been motivated to perform such an addition, as sequence numbers are commonly associated with security associations. This is taught in paragraph 23 of Xiong.. Also, by incorporating sequence numbers, the transmissions are more secure, as they prevent replay attacks (also found in paragraph 23).

As per claim 22, Xiong teaches wherein the security association information comprises at least one byte count (paragraph 23).

As per claim 24, Xiong teaches wherein the sending step further comprises repeatedly sending the security association information at intervals according to at least one sequence number (paragraph 23; also Simon paragraphs 57, 60, and 66; wending updates to the security association is taught throughout Simon, and it would have been obvious to combine this with the teachings of Xiong to show that it may be sent in accordance to sequence numbers).

As per claim 29, Simon teaches defining an interval at which to update the security association information in paragraphs 79-80. Xiong teaches defining a quantity to adjust a sequence number in paragraph 23. Xiong also teaches determining whether to send the security association information according to a comparison of a sequence number with the interval in paragraph 23. Although it does not teach a second processor, Simon teaches incorporating sending security associations to second security processors.

As per claim 34, Xiong teaches sending replay window information to the second security processor (paragraph 23, in combination with the Simon reference incorporating the second security processor).

12. Claims 40, 41, 43, and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Simon and Murthy as applied above, and in view of Rosenow et al. US Patent No. 5,022,076 (hereinafter Rosenow).

As per claim 40, Simon teaches changing the routing of packet flow by either routing the first packet flow to the second security processor instead of the first security processor or routing the second packet flow to the first security processor instead of the second security processor (paragraphs 72, 73, 75, 76, and 77). However, Simon does not explicitly teach wherein the one host processor changes the routing of the packet flow. However, routing processes from one processor to another processor is well known in the art, as taught by Rosenow. Rosenow teaches throughout the reference the routing of processes from one processor to another processor, such as in the abstract and in col. 23 lines 59 to col. 24 line 11.

At the time of the invention, it would have been obvious to one of ordinary skill in the art to combine the Rosenow reference with the Simon combination. One of ordinary skill in the art would have been motivated to perform such an addition to provide more reliability by creating a fault tolerant system. This is taught throughout Rosenow, such as in the abstract and col. 4 lines 15-61.

As per claim 41, Rosenow teaches wherein the change in the routing is in response to a failure of the first packet flow through the first security processor or the second flow through the second security processor (abstract; col. 23 line 59 to col. 24 line 11). Also, this is taught in Simon's abstract, paragraph 79, and paragraph 95.

Claim 43 is rejected using the same basis of arguments used to reject claim 40 above.

Claim 44 is rejected using the same basis of arguments used to reject claim 40 above. (it routes to whatever processor is working).

Conclusion

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to JASON K. GEE whose telephone number is (571)272-6431. The examiner can normally be reached on M-F, 7:00 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kambiz Zand can be reached on (571) 272-38113811. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jason Gee
Patent Examiner
Technology Center 2100
09/08/2008

/Kambiz Zand/

Supervisory Patent Examiner, Art Unit 2134